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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/185,248	11/03/1998	MARK E. EIDSON	INTL-0136-US	5197

7590 03/12/2002

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EXAMINER

ARMSTRONG, ANGELA A

ART UNIT PAPER NUMBER

2654

DATE MAILED: 03/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/185,248

Applicant(s)

EIDSON ET AL.

Examiner

Angela A. Armstrong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 10-12, 16, 19-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-12, 16, 19-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Content of Specification

1. The specification is objected to because it lacks a brief summary of the invention.

The contents of the specification should include a brief summary of the invention, specified as follows

- (f) Brief Summary of the Invention: A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 10-12, 16, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farhangi et al. (US Patent No. 5,647,008) in view of Bergher et al. ("Dolby AC-3TM and MPEG-2 Audio Decoder IC with 6-channels Output", IEEE Trans. on Consumer

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Electronics, August 1997) ,Hinderks (US Patent No. 5,706,335) and Alexander (US Patent No. 6,259,957).

4. Regarding claims 1, 11, 19, 21, and 23,

Receiving a first audio data stream in a first perceptually based format is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67; col. 4, lines 1-61;

Obtaining a second audio data stream is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67 and col. 4, lines 1-61.

Farhangi et al. discloses receiving compressed data streams and decoding the data streams into a raw format, however they do not specifically teach that the received data is encoded in Dolby AC-3 or MPEG-2 format or that the raw format is linear pulse code modulated. Refer to Bergher et al. who teach an audio decoder that receives Dolby AC-3 and MPEG-2 data streams and decodes the data into pulse code modulated formats for use in US digital TV and HDTV, DVD, and general multimedia applications (Abstract; page 357; page 358).

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the multimedia signal mixing system of Farhangi et al. to implement receiving Dolby AC-3 and MPEG-2 coded data and decode the data into a pulse code modulated format to allow for recovery of the original pulse code modulated data for use in general multimedia applications as suggested by Bergher et al., to allow for mixing the raw format signals with other raw format signals to produce combined output signals as suggested by Farhangi et al.

Combining a decoded first audio data stream with a second audio data stream is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67; col. 4, lines 1-61. Farhangi et al do not specifically

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teach that the digital mixer is a linear pulse code modulated mixer. Refer to Alexander et al who teach a digital data processing system and method, which allows for mixing of PCM data (col. 8, lines 26-30), for the purpose for meeting the demand of increasingly sophisticated computer users for audio subsystems which produce high quality sound (col. 1, lines 51-53).

Therefore, it would have been obvious to one of ordinary skill at the time of the invention to allow for PCM mixing as taught by Alexander et al, for the purpose of meeting the demand of increasingly sophisticated computer users for audio subsystems which produce high quality sound as suggested by Alexander et al.

Farhangi et al. teach transmitting the encoded combined audio data stream at col. 7, lines 18-21 for further processing or handling and they implement a CODEC on the receiving end of the system. However, they do not specifically teach that the combined encoded data is transmitted to a CODEC circuit. Refer to Hinderks who teaches transmitting coded signals through a transmission channel with limited bandwidth using a CODEC (col. 3, lines 33-40) for the purpose of allowing for two-way communication between multiple devices (col. 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the system of Farhangi et al. to transmit the combined encoded signals to a CODEC circuit to allow for two-way communication between multiple devices as suggested by Hinderks.

5. Regarding claims 2, 3 and 4,

Farhangi et al. teaches encoding the combined signals at Figure 2, element 296. However they do not specifically teach encoding the combined data in an AC-3 or MPEG format. Refer to Bergher et al. who teach that AC-3 and MPEG compress signals into streams that provide

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reduced transmission bandwidth or recording area without audibly degrading the perceived quality.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the system of Farhangi et al. to encode the combined signals in either an AC-3 or MPEG format for the purpose of compressing the signal to achieve reduced transmission bandwidth or recording area without degrading the audio quality as taught by Bergher et al.

6. Regarding claim 10,

Combined audio data stream comprises a digital data stream is taught by Farhangi et al. at figure 2.

7. Regarding claims 12, 16 and 20,

Receive a first audio data stream in a first perceptually based format is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67; col. 4, lines 1-61;

Decode the first audio data stream is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67; col. 4, lines 1-61;

Acquire a second audio data stream is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67 and col. 4, lines 1-61.

Farhangi et al. discloses receiving compressed data streams and decoding the data streams into a raw format, however they do not specifically teach that the received data is encoded in Dolby AC-3 or MPEG-2 format or that the raw format is linear pulse code modulated. Refer to Bergher et al. who teach an audio decoder that receives Dolby AC-3 and MPEG-2 data streams and decodes the data into pulse code modulated formats for use in US

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digital TV and HDTV, DVD, and general multimedia applications (Abstract; page 357; page 358).

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the multimedia signal mixing system of Farhangi et al. to implement receiving Dolby AC-3 and MPEG-2 coded data and decode the data into a pulse code modulated format to allow for recovery of the original pulse code modulated data for use in general multimedia applications as suggested by Bergher et al., to allow for mixing the raw format signals with other raw format signals to produce combined output signals as suggested by Farhangi et al.

Combining a decoded first audio data stream with a second audio data stream is taught by Farhangi et al. at Figure 2, col. 3, lines 9-67; col. 4, lines 1-61.

Farhangi et al. teaches encoding the combined signals at Figure 2, element 296. However they do not specifically teach encoding the combined data in a perceptually based format. Refer to Bergher et al. who teach that perceptually based formats such as AC-3 and MPEG compress signals into stream that provides reduced transmission bandwidth or recording area without audibly degrading the perceived quality.

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the system of Farhangi et al. to encode the combined signals in either a perceptually based format for the purpose of compressing the signal to achieve reduced transmission bandwidth or recording area without degrading the audio quality as taught by Bergher et al.

Farhangi et al. teach transmitting the encoded combined audio data stream at col. 7, lines 18-21 for further processing or handling and they implement a CODEC on the receiving end of the system. However, they do not specifically teach that the combined encoded data is

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transmitted to a CODEC circuit. Refer to Hinderks who teaches transmitting coded signals through a transmission channel with limited bandwidth using a CODEC for the purpose of allowing for two-way communication between multiple devices (col. 2, lines 33-37).

Therefore, it would have been obvious to one of ordinary skill at the time of invention to modify the system of Farhangi et al. to transmit the combined encoded signals to a CODEC circuit to allow for two-way communication between multiple devices as suggested by Hinderks.

Response to Arguments

5. Applicant's arguments with respect to claims 1-4, 10-12, 16, 19-21, and 23 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

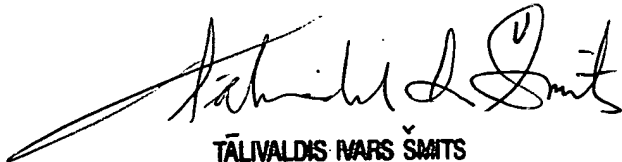
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela A. Armstrong whose telephone number is 703-308-6258. The examiner can normally be reached on Monday-Thursday 7:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

AAA
March 5, 2002



TĀIVALDIS RĀRS ŠMITS
PRIMARY EXAMINER